

Data Collection and Management Tools for Watershed Restoration Programs

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A basin-scale watershed restoration program requires and generates a large volume of data about the water resource. Managing that data---so that it is collected, verified, accessed and shared appropriately---is a critical part of the program's success. Furthermore, increasing the speed and efficiency by which data become available to make decisions can be a key programmatic challenge.

The Freshwater Trust will discuss the data management tools it uses to help manage watershed restoration programs in Oregon and Idaho. The tools aid in the efficient collection and processing of data as well as organize data to complete adaptive management feedback loops for program and project managers and regulatory agencies.

Tools include:

- Program Administrative Toolkit, a set of software tools that support program administration, including a database for storing all restoration project data along with data input forms and reporting and tracking features.
- StreamBank Monitoring App for collecting pre- and post-project implementation field data and streamlining workflow and analysis over multiple years.
- Fulcrum for field data collection related to recording project maintenance activities and monitoring of irrigation upgrade projects.
- Automation of the Shade-a-lator module of the Heat Source model, which calculates the amount of solar radiation hitting the surface area of a stream and how that changes with restoration. Automating the aggregated data inputs needed to run the model over dozens of potential project sites saves a significant amount of staff hours.